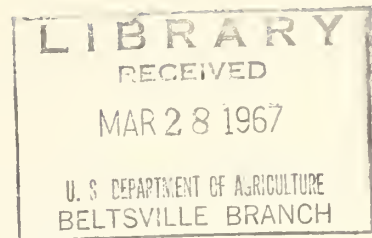


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REVIEW OF 1965 PRICE DEVELOPMENTS IN THE FOREIGN AGRICULTURAL  
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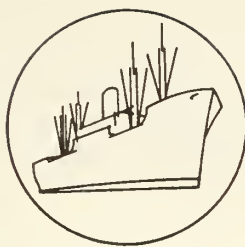
by

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## SPECIAL in this issue

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### REVIEW OF 1965 PRICE DEVELOPMENTS IN THE FOREIGN AGRICULTURAL TRADE OF THE UNITED STATES

by

Hans G. Hirsch 1/

Prices and their changes constitute a salient feature of an exchange economy. International commodity prices and their changes have long been a crucial element of trade analysis and projection, in both the private and the public sectors of the economy. Present concern about the U.S. balance of payments problem and the contribution agricultural trade makes to alleviate the problem have stimulated interest in price changes as they shape the terms of trade. As commonly measured, the terms of trade are the ratio of an export price index and an analogous import price index.

A number of price indexes are in wide use. Some are made up exclusively or predominantly of agricultural commodity prices and can thus be considered agricultural price indexes. In this study, price developments during the past 2 years, as reflected in several widely used index numbers, are compared with specially constructed price index numbers computed from the 20 or 21 commodities or commodity groups making up a significant share (about two-thirds) of the foreign agricultural trade of the United States. The specially constructed U.S. agricultural export price indexes summarize price developments which differ radically from all others.

These specially constructed index numbers of U.S. agricultural trade, exports, and imports are presented to compare the year and the quarter ended September 30, 1965, with similar periods 1 year earlier. What these index numbers mean as to terms of trade is analyzed. Finally, individual commodity unit values and prices, together with their outlook for the fourth quarter, are presented and discussed.

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Widely Published Index Numbers Decline. Agricultural prices, as measured by 3 authoritative indexes, were at their lowest level in at least 2 years during the fall of 1965. A seasonal fall pickup had been discernible in 1962, 1963, and 1964. In 1965, it came late and was not pronounced (see the Reuter's and Dow-Jones series in Fig. 1). Thus, the Dow-Jones index showed the price level to be 13 percent lower in November 1965 than it had been 2 years earlier. The decline averaged slightly over one-half percent per month.

During the year ended September 1965, the Dow-Jones Index averaged 7.6 percent less than during the preceding year. This decline approximately reflected the average decline of slightly over one-half percent per month from November 1963 to November 1965. The Dow-Jones Index is made up of the prices of 12 agricultural commodities in the United States; most are domestically produced, but some are imported. The Reuter's Index, on the other hand, declined by only 3.6 percent. This lesser decline is due to several factors -- 1 of which is a different product mix which includes nonagricultural commodities making up 19 percent of the total. One significant factor is that the Reuter's Index is based upon prices of commodities delivered or "c.i.f." (cost, insurance, and freight), United Kingdom; it thus reflects ocean freight rates.

Ocean Freight Rates Have Risen. The index numbers of the U.K. general trip charters, during July-September 1965, averaged 145 percent of those in 1958, compared with 118 percent during the same quarter in 1964. During the year ended September 1965, that index averaged 136 compared with 127 a year earlier, a 7 percent increase. Similarly, during that year freight rates of grain to the U.K. from U.S. Gulf ports averaged 11 percent higher than a year earlier and those from the St. Lawrence River averaged 8 percent higher.

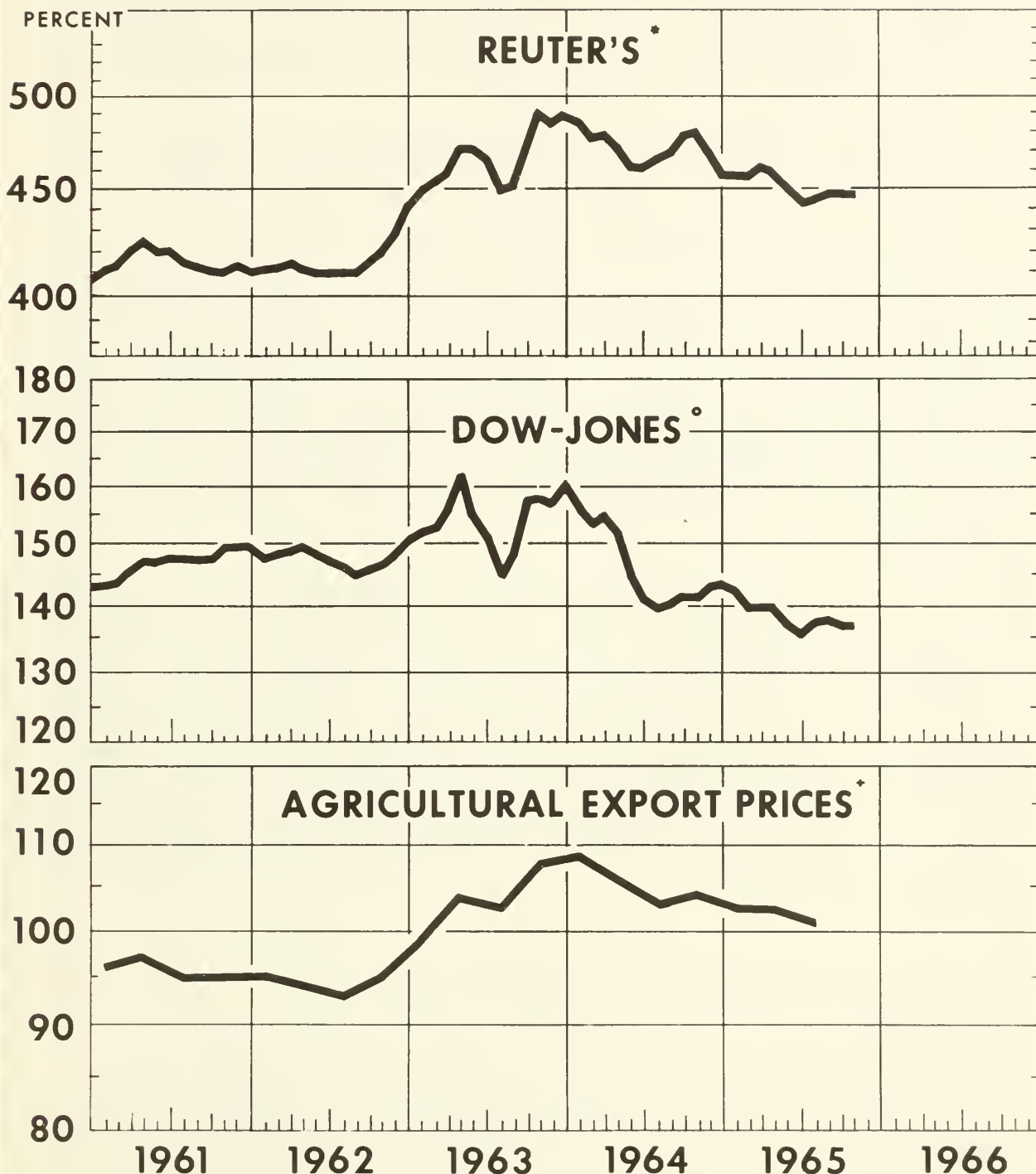
UN Agricultural Export Price Index Declines Moderately. When the c.i.f. prices of commodities decline but freight rates rise, export prices should decline more than c.i.f. prices. However, the Agricultural Export Price Index made from United Nations data and portrayed in Fig. 1, differs from the Reuter's and Dow-Jones Indexes in many ways. It reached a recent high of 109 percent of 1958 during the first quarter of 1964 and declined steadily thereafter to 101 during the third quarter of 1965, a decline averaging only 0.4 percent per month. During the year ended September 30, 1965, the agricultural export price index averaged 102, only 2 percent less than the year before.

U.S. Foreign Agricultural Trade Indexes Move in Different Directions. The prices (unit values <sup>2/</sup>) of principal U.S. agricultural imports averaged 3.8

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<sup>2/</sup> Value divided by quantity. The terms price and unit value are used interchangeably here. Conceptually they differ. A unit value may change as a result of a change in the product mix, while prices, at the same time, remain stable. For instance, non-durum wheat and durum wheat prices may not change; but if more durum wheat is exported in a period than in the preceding period, the unit value of wheat exports rises, because durum wheat, the higher-priced product in the "mix" which is wheat, has become relatively more important.

# World Agricultural Prices Have Declined From High Point Two Years Ago



\* REUTER'S, SEPT. 18, 1931 = 100; AVERAGE OF MONTHLY HIGH AND LOW INDICES

° DOW-JONES, 1924-26 = 100; MONTHLY AVERAGE DAILY SPOT COMMODITY INDEX

+ AGRICULTURAL EXPORT PRICES, 1958 = 100; AVERAGE OF UN FOOD (.54) AND AGRICULTURAL NONFOOD (.46) EXPORT PRICE INDICES



percent less during the year ended September 30, 1965, than during the preceding year. <sup>3/</sup> <sup>4/</sup> That decline was within the range of the different rates of decline in the Dow-Jones, Reuter's and agricultural export price indexes.

In sharp contrast to these declines, prices (unit values) of principal U.S. agricultural exports during the same year averaged 2.8 percent higher than a year earlier. That index was computed from 12 leading export products accounting for 73 percent of total U.S. agricultural exports. The import price index was computed from products or product groups accounting for almost two-thirds of total U.S. agricultural imports.

When the import and export price changes are aggregated, an overall U.S. agricultural trade price index is obtained. That index, during the year ended September 30, 1965, averaged 0.4 percent above a year earlier (table 1).

Terms of Trade Were Favorable for U.S. Agriculture. In the face of generally lower world agricultural prices, principal U.S. agricultural exports, on the average, experienced price increases. A product mix of leading U.S. agricultural products such as was exported during the 2-year period ended September 30, 1965, brought \$102.8 during the the latter year for each \$100.0 earned the year before. Inversely, a product mix of leading U.S. agricultural import products cost only \$96.2 in the more recent year compared with \$100.0 the year before. Thus, the terms of trade were very favorable to U.S. agriculture. These are customarily measured as the ratio of the export price index and of the import price index. With the former at 102.8 percent of the preceding year and the latter at 96.2 the terms of trade were 106.9 percent of the preceding year.

Caution must be exercised in interpreting this figure which reveals that, compared with the preceding year, the United States transacted its foreign agricultural trade on very favorable terms. First and foremost, favorable U.S. terms of trade would tend to be unfavorable terms of trade to certain U.S. trading partners. <sup>5/</sup> To the extent to which they earn less from their exports and must pay more for their imports, they may have to reduce the amount of their purchases or they may have to go into debt to finance their purchases. Going into debt for them may mean that the United States must extend credit to them. Alternatively, if they cannot qualify for either ordinary commercial financing (cash or short-term commercial credit), the United States may increase the portion of their agricultural import requirements which they obtain under the Food for Peace program.

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<sup>3/</sup> U.S. imports are valued at their export prices. Thus, unit values of U.S. imports exclude charges for ocean freight and insurance.

<sup>4/</sup> The specially constructed price index numbers in this study are of "Fisher's Ideal" type.

<sup>5/</sup> Considering the multilateral nature of trade, this is a simplifying statement. For instance, the countries to which we sell corn and soybeans more dearly may not be the countries from which we buy coffee and cocoa beans more cheaply.



Table 1.--Unit values of 20 or 21 leading U.S. agricultural trade commodities, years and quarters, ended September 30, 1965 and 1964 1/ 2/

Commodity	Unit	Unit value, year ended		Unit value, quarter ended	
		September 30		September 30	
		1965	1964	1965	1964
		Cents	Percent	Cents	Percent
<u>Export Commodities</u>					
Wheat.....	Bu.	168.5	179.5	93.9	162.2
Wheat flour.....	Cwt.	401.0	400.2	100.2	398.3
Corn.....	Bu.	140.7	135.6	103.8	140.3
Sorghum grain.....	Bu.	121.7	121.7	100.0	118.9
Soybeans.....	Bu.	292.9	270.1	108.4	297.8
Soybean oil.....	Lb.	13.4	10.3	130.6	13.3
Protein meal.....	Lb.	3.8	3.9	97.3	3.9
Cotton.....	Lb.	26.1	26.6	98.5	26.2
Tobacco, flue-cured.....	Lb.	84.6	82.0	103.1	85.0
Rice, milled.....	Lb.	7.1	6.9	103.6	7.1
Tallow, inedible.....	Lb.	8.9	6.9	129.5	8.9
Nonfat, dry milk.....	Lb.	12.4	8.1	153.4	13.6
Average, i.e., index number.....			102.8		102.5
<u>Import commodities 2/</u>					
Coffee.....	Lb.	39.0	36.6	106.6	36.4
Sugar.....	Lb.	5.6	7.0	79.8	5.8
Beef and veal 3/.....	Lb.	33.0	32.3	102.2	32.9
Rubber.....	Lb.	18.8	20.9	90.0	17.7
Wool 2/.....	Lb.	62.3	70.1	88.9	61.3
Cocoa beans.....	Lb.	17.0	22.3	76.2	13.9
Tobacco.....	Lb.	69.2	63.9	108.3	70.7
Bananas 2/.....	Lb.	---	---	---	4.9
Hams.....	Lb.	65.7	67.7	97.0	66.4
Average, i.e., index number.....			96.2		91.3
<u>All above commodities</u>					
Average, i.e., index number.....			100.4		98.2

1/ Unit values were computed from the value and quantity figures published in Foreign Agricultural Trade of the United States.

Cotton poundages were obtained from U.S. Bureau of the Census Reports, Supplement to EM 522. 2/ The valuation of bananas was revised effective May 1964. This made the year-to-year price comparison impossible. To retain a similar proportion of product coverage in the annual and quarterly series carpet wool (wool, free in bond) was substituted for bananas in the annual series. Thus, annual wool unit values are derived from all wool imports, whereas quarterly wool unit values are derived from dutiable wool only.

3/ Fresh, chilled or frozen.

Secondly, the terms of trade presented in this paper relate to agricultural trade only. Agricultural trade is only a fraction of total trade and total trade, in turn, is only a part, although the most important part, in the total balance-of-payments picture.

Thirdly, the terms of trade computed from import unit values disregard charges for ocean freight and insurance (see footnote 3). Such charges are believed on the average to add about 10 percent of the export values of U.S. imports. Since ocean freight rates have risen while the import unit values shown have fallen, U.S. agricultural imports, valued on a delivered or c.i.f. basis, have dropped less in unit value than the published data (based on export valuation) show. This is a relatively minor factor, however.

Third Quarter Price Indexes Lower Than Annual Averages. During the quarter ended September 30, 1965, U.S. agricultural export prices averaged 2.5 percent above those of third quarter 1964, a slightly smaller increase than the 2.8 percent increase for the 12-month period. Import prices, however, averaged significantly less during third quarter 1965 than a year earlier. At 91.3, they were 8.7 percent less than a year earlier. Export and import commodity prices combined declined 1.8 percent. The deep drop in the import price index imparted a decline to the combined index.

With import prices during the third quarter so much less than a year earlier, the terms of trade during the third quarter were 112.3 (i.e., 102.5 divided 91.3).

Different Commodity Unit Values Diverge Widely. Wheat, the most important U.S. agricultural export commodity, declined considerably in price, both for the year and for the third quarter (table 1). The price of cotton also declined both from year-to-year and from quarter-to-quarter, but only moderately. These declines were more than offset by sizable increases in the prices of soybeans, soybean oil, inedible tallow, and nonfat dry milk. The price increase in the last product was the largest in percentage. Corn and rice prices rose somewhat. The prices of wheat flour, protein meal, and flue-cured tobacco for export rose from year-to-year and dropped from quarter-to-quarter or vice versa, and the price of sorghum grain hardly changed at all.

Import product prices moved at least as divergently as export product prices during the year and quarter. Coffee accounts for over two-fifths of the total value of the import products included in the import price index. In the year-to-year comparison, the price of coffee was up 6.6 percent, a reflection of the higher price that prevailed during the half year, October 1964 to March 1965, compared with a year earlier. Since April 1965, by contrast, coffee prices have been lower than during the same period in 1964.

The price of sugar was above the price objective of the Sugar Act until April 1964. Thus, the year-to-year comparison shows a 20.2 percent drop in the price of sugar; by contrast the unit value during third quarter 1965 was only 5.1 percent less than a year earlier. Actually, the spot price of sugar, c.i.f., New York, and duty-paid, during the third quarter of 1965 averaged 9.0 percent above a year earlier.

The third quarter 1965 unit value of 5.8 cents per pound, as expected, is 1.0 cent less than the New York spot price -- the difference reflecting duty and ocean freight. A year earlier the spot price was 6.2 cents and the unit value was 6.1 cents. This insufficient difference implies that sugar which was then imported had been contracted for earlier when prices had been considerably higher.

The prices of the other import commodities considered in the context of this paper moved in about the same fashion from year-to-year as they did from the third quarter of 1964 to the third quarter of 1965: The unit value of beef and veal, fresh, chilled, or frozen, was up slightly and the unit value of tobacco was up more pronouncedly. The apparent increase in the unit values of tobacco, mostly from Turkey and Greece, to a large extent relates to merchandise which the U.S. Customs Bureau released from storage in bonded warehouses. As a result of a plentiful 1964 crop, Turkish and Greek tobacco prices were in fact soft; but with a smaller 1965 crop, they are expected to strengthen in 1966.

Rubber unit values were down 10 percent, year-to-year and quarter-to-quarter. Cocoa bean prices sank to their lowest post-war level; the average price for the year ended September 30, 1965 was 23.8 percent below a year earlier and for the third quarter it was 34.1 percent below that quarter a year earlier. Wool prices were down significantly; but annual unit values cannot be compared with quarterly unit values, as shown in table 1 and explained in footnote 2 of that table. As also explained there, current banana unit values cannot be compared with those before June 1964. Third quarter 1965 values, however, were above those a year earlier. "Hams and shoulders, canned and cooked" showed little change in unit values.

Limitations of This Study. As previously implied, this study is concerned with the commodities 6/ which are most important in the foreign agricultural trade of the United States. Commodity groups which in the aggregate are of great importance and make up about one-third of total U.S. agricultural trade (exports and imports combined) have not been analyzed and not included in the specially constructed price indexes. Examples of these are fruits, nuts, vegetables, and their preparations, oilseeds and oils other than soybeans and soybean oil, animals, and most animal products. The aggregate value (price and quantity combined) of these commodities changed quite differently during this period from that of the leading commodities (table 2).

Indeed, the value of the one-third portion of both exports and imports not included increased from year-to-year and from quarter-to-quarter. By contrast, the value of the leading import commodities considered in the study declined from year-to-year and from quarter-to-quarter, as did the value of leading export commodities, considered in the study, from year to year. Only for the quarter-to-quarter comparison, exports of both commodities covered and not covered, increased at about the same rate, viz. by 7 percent.

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6/ "Commodities," in this context, refers to individual commodities, as listed in the monthly series of U.S. agricultural exports and U.S. agricultural imports for consumption, published in Foreign Agricultural Trade of the United States. Only in the case of wool, 3 "commodities" were combined into a group in the quarterly series and a fourth "commodity," wool (free in bond), was added in the annual series; see also footnote 2 to table 1.



Table 2 .--Value indexes of U.S. agricultural trade, year-to-year and quarter-to-quarter comparisons

Kind of agricultural trade	Year ended September 30	Quarter ended September 30
	<u>1965</u>	<u>1965</u>
	1964	1964
	<u>Percent</u>	
All exports.....:	99.8	107.0
Exports covered.....:	98.9	107.1
Exports not covered.....:	102.1	106.8
All imports.....:	97.8	96.2
Imports covered.....:	92.8	93.0
Imports not covered.....:	106.8	102.3
Total (exports and im- ports), all.....:	99.0	102.6
Total covered.....:	96.7	101.6
Total not covered.....:	104.3	104.8

Outlook. Since the end of third quarter 1965 for which trade unit values are shown in table 1, prices of several important U.S. export commodities have declined, either actually, as in the case of corn and sorghum grain, or in relation to the price level of a year earlier, as in the case of soybeans. In December, the soybean oil price was about at the year-earlier level after it had averaged higher than a year earlier during each month of the year ended September 30, 1965. Wheat prices continued substantially below a year earlier, and the price of cotton continued to lack strength. Thus, indexes of principal U.S. export commodities in the fourth quarter of 1965 and calendar year 1965 will likely be lower than the third quarter and year-ended September indexes presented here.

Among leading import crops, cocoa bean prices recovered substantially during the fall. The mid-December price, at New York, was 21 cents a pound, up from 12 cents in July. The price of sugar destined for the U.S. market was above year-earlier levels during the last months of 1965. Representative wool price quotations, during the fourth quarter, rose markedly and to levels well above a year earlier. Rubber prices on the other hand continued to be less than a year earlier. Coffee import unit values have been below year-earlier levels since April 1965; considering the high unit values that prevailed before that month, they are likely to continue below year-earlier levels into 1966. In view of lower prices for coffee, which is the major commodity in the import price index, average import prices for the fourth quarter and for the calendar year will likely be down from a year earlier and may again be less than the export index. Thus, the ratio of export to import prices -- the terms of trade -- may continue favorable for U.S. agricultural trade. However, it probably will not be as favorable as during the year and during the final quarter of the year ended September 30, 1965.